

Staff Assessment and Draft
Environmental Impact Statement

**PALEN SOLAR POWER
PROJECT**

Application For Certification (09-AFC-7)



**U.S. BUREAU
OF LAND
MANAGEMENT
and
CALIFORNIA
ENERGY
COMMISSION**

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PALEN SOLAR POWER PROJECT (09-AFC-7) STAFF ASSESSMENT / DRAFT ENVIROMENTAL IMPACT STATEMENT

EXECUTIVE SUMMARY

- A. INTRODUCTION**
- B. DESCRIPTION OF THE PROPOSED PROJECT AND ALTERNATIVES**
 - B.1 PROPOSED PROJECT**
 - B.2. ALTERNATIVES EVALUATED**
 - B.3 CUMULATIVE SCENARIO**
- C. ENVIRONMENTAL ANALYSIS**
 - C.1 AIR QUALITY**
 - C.2 BIOLOGICAL RESOURCES**
 - C.3 CULTURAL RESOURCES AND NATIVE AMERICAN VALUES**
 - C.4 HAZARDOUS MATERIALS MANAGEMENT**
 - C.5 HEALTH AND SAFETY**
 - C.6 LAND USE, RECREATION, AND WILDERNESS**
 - C.7 NOISE AND VIBRATION**
 - C.8 SOCIOECONOMIC AND ENVIRONMENTAL JUSTICE**
 - C.9 SOIL AND WATER RESOURCES**
 - C.10 TRAFFIC AND TRANSPORTATION**
 - C.11 TRANSMISSION LINE SAFETY AND NUISANCE**
 - C.12 VISUAL RESOURCES**
 - C.13 WASTE MANAGEMENT**
 - C.14 WORKER SAFETY & FIRE PROTECTION**
- D. ENGINEERING ASSESSMENT**
 - D.1 FACILITY DESIGN**
 - D.2 GEOLOGY, PALEONTOLOGY, AND MINERALS**
 - D.3 POWER PLANT EFFICIENCY**
 - D.4 POWER PLANT RELIABILITY**
 - D.5 TRANSMISSION SYSTEM ENGINEERING**
- E. GENERAL CONDITIONS**
- F. LIST OF PREPARERS**
- G. WITNESS QUALIFICATIONS AND DECLARATIONS**

EXECUTIVE SUMMARY

Testimony of Alan Solomon

INTRODUCTION

This Staff Assessment / Draft Environmental Impact Statement (SA/DEIS) is a joint document being published by the U.S. Bureau of Land Management (BLM) and the California Energy Commission (CEC). It is in the interest of the BLM and the Energy Commission to share in the preparation of a joint environmental analysis of the proposed project to avoid duplication of staff efforts, to share staff expertise and information, to promote intergovernmental coordination at the local, state, and federal levels, and to facilitate public review by providing a joint document and a more efficient environmental review process.

This SA/DEIS contains staff's independent evaluation of the Palen Solar I¹ (applicant) Palen Solar Power Project application which was filed with the BLM and CEC. The application filed with BLM is the BLM Application for a Right-of-Way (ROW) Grant on BLM-administered land (CACA 048810) and the application filed with the Energy Commission is the Application for Certification (09-AFC-7). The SA/DEIS examines engineering, environmental, public health and safety aspects of the Palen Solar Power Project (PSPP), based on the information provided by the applicant and other sources available at the time the SA/DEIS was prepared. The SA/DEIS will also include for BLM a Draft Land Use Plan Amendment (Draft PA) to the California Desert Conservation Area (CDCA) Plan (1980) as Amended.

The SA/DEIS contains analyses normally contained in an Environmental Impact Report (EIR) required by the California Environmental Quality Act (CEQA), as well as analyses required as part of an EIS prepared under the National Environmental Policy Act (NEPA). When considering a project for licensing, the Energy Commission is the lead state agency under CEQA, and its process is functionally equivalent to the preparation of an EIR. Similarly, BLM is the Federal lead agency for the NEPA analysis of the proposed ROW.

The applicant has also applied for the American Recovery and Reinvestment Funds (ARRA) Renewable Energy Grant Program. Two goals of the ARRA Renewable Energy Grant Program are to enhance America's energy independence and create near-term employment opportunities for Americans. To be eligible for the ARRA funds, the applicant must begin construction on the Palen project by the end of 2010.

This SA/DEIS serves as staff's analysis of the engineering, environmental, public health and safety aspects of the proposed project, based on the information provided by the applicant and other sources available at the time the SA/DEIS was prepared. The SA/DEIS contains analyses normally contained in an Environmental Impact Report

¹ Chevron Energy Solutions and Solar Millennium have a joint development agreement. Chevron Energy Solutions applied for the Right of Way for Palen Solar Power Project. To facilitate the permitting of the Palen Solar Power Project (PSPP), the Applicant is requesting that the CEC issue one License to a Project- specific company. The company for PSPP is Palen Solar I, LLC a wholly owned subsidiary of Solar Millennium and the single Applicant for the PSPP.

(EIR) required by the California Environmental Quality Act (CEQA), as well as analyses required as part of an EIS prepared under the National Environmental Policy Act (NEPA).

In support of CEC's certification process, the Energy Commission staff has the responsibility to complete an independent assessment of the project's engineering design and its potential effects on the environment, the public's health and safety, and whether the project conforms to all applicable laws, ordinances, regulations and standards (LORS). The staff also recommends measures to mitigate potential significant adverse environmental effects and conditions of certification for construction, operation, maintenance and eventual decommissioning of the project, if approved by the Energy Commission. This SA/DEIS is not the decision document for the CEC's proceedings nor does it contain findings of the Energy Commission related to environmental impacts or the project's compliance with local/state/federal legal requirements. The SA/DEIS will serve as staff's testimony in evidentiary hearings to be held by the Committee of two Commissioners who are overseeing this case. The Committee will hold evidentiary hearings and will consider the recommendations presented by staff, the applicant, all parties, government agencies, and the public prior to the Committee proposing its decision. The Energy Commission will make a final decision, including findings, after the Committee's publication of its proposed decision.

In support of its ROW and CDCA Plan Amendment decision processes, the BLM has the responsibility to evaluate the environmental impacts of the proposed action, the No Action alternative and other reasonable alternatives that may meet BLM's purpose and need for the proposed project. The Staff Assessment/DEIS will include for BLM a Draft PA. The SA/DEIS is available for a 90-day public comment period. The NOA (published by the EPA in the *Federal Register*) will initiate the 90-day public review and comment period.

Following completion of that period, CEC and BLM will review and respond to comments provided by the public and other agencies. The responses to the comments, and other information identified during this period, will be incorporated into a Supplemental Staff Assessment (SSA)/Final EIS (FEIS) where appropriate. The FEIS will also identify BLM's preferred alternative.

BLM's objective is to select an alternative that is inclusive of the purpose and need of the project and adequately addresses the environmental issues while still maintaining the proposed project output. Currently, the BLM has identified the reconfigured alternative as the preferred alternative in the SA/DEIS; however, this alternative has impacts to biological resources that may require further modification. As BLM and CEC progress through the process, analysis of both public and agency comment will be considered in the selection of the final preferred alternative that will be presented in the SSA/FEIS. A Notice of Availability (NOA) of the FEIS will be published in the *Federal Register* when the FEIS is completed; the BLM will issue a Record of Decision (ROD) no earlier than 30 days after the FEIS is published.

The SSA/FEIS will include for BLM a Proposed Land Use Plan Amendment (Proposed PA). The NOA will initiate a 30-day period in which to protest the Proposed PA to the Director of the BLM.

Following resolution of any protests BLM may then publish an Approved Plan Amendment and a Record of Decision (ROD) on the Project Application. The decision regarding the ROW grant is appealable to the Interior Board of Land Appeals upon issuance of the ROD.

PROPOSED PROJECT LOCATION AND DESCRIPTION

The Palen Solar Power Project (PSPP) is a concentrated solar thermal electric generating facility with two adjacent, independent, and identical units of 250 megawatt (MW) nominal capacity each for a total nominal capacity of 500 MW. The project site is located approximately 0.5 mile north of U.S. Interstate-10 (I-10) and approximately 10 miles east of Desert Center, in an unincorporated area of eastern Riverside County, California.

The proposed project site includes one privately-owned 40-acre parcel, which has been incorporated into the proposed eastern solar field. The remainder of the project facilities would be entirely on Federal land. The applicants are seeking a ROW grant for approximately 5,200 acres of land administered by the BLM Palm Springs-South Coast Field Office. Construction and operation of the project would disturb a total of about 2,970 acres.

The PSPP proposes to utilize solar parabolic trough technology to generate electricity. With this technology, arrays of parabolic mirrors collect heat energy from the sun and refocus the radiation on a receiver tube located at the focal point of the parabola. A heat transfer fluid (HTF) is brought to high temperature (750°F) as it circulates through the receiver tubes. The hot HTF is then piped through a series of heat exchangers where it releases its stored energy to generate high pressure steam. The steam is then fed to a traditional steam turbine generator where electricity is produced.

MAJOR COMPONENTS OF THE PROPOSED PROJECT

The following items are some of the major components of PSPP. For a more exhaustive list, please see **Section B.1.2**, in the **Project Description** section.

Project Construction

Project construction is expected to occur over a total of 39 months. Project construction will require an average of 566 employees over the entire 39-month construction period, with manpower requirements peaking at approximately 1,140 workers in Month 17 of construction. The construction workforce will consist of a range of laborers, craftsmen, supervisory personnel, support personnel, and management personnel.

Temporary construction parking areas will be provided within the power plant site adjacent to the laydown area. The plant laydown area will be utilized throughout the build out of the two solar units.

Operation and Maintenance

While electrical power is to be generated only during daylight hours, PSPP will be staffed 24 hours a day, 7 days per week. A total estimated workforce of 134 full time employees will be needed with both units operating.

Connection to Preexisting Transmission System

The PSPP facility would be connected to the SCE transmission system at the new Red Bluff substation planned by SCE approximately 10 miles west of the PSPP project site.

Transmission Line Route

Although the route has not been finalized, the gen-tie line is expected to proceed west from the PSPP project site to SCE's planned Red Bluff substation.

Fuel Supply and Use

The auxiliary boiler would be fueled by propane. Propane would be delivered to the plant site via truck from a local distributor and stored in 18,000-gallon above ground tanks (one in each power block). The estimated propane usage per unit for normal operations is 8 MMBtu/hr overnight and 34 MMBtu/hr for one half-hour during startup each morning.

Water Supply and Use

The project proposes dry-cooled technology. The project's limited water uses include solar mirror washing, feedwater makeup, fire water supply, onsite domestic use, cooling water for auxiliary equipment, heat rejection, and dust control.

Water Requirements

The average total water requirements for the power plant is estimated to be about 300 acre feet per year (afy), which corresponds to an average flow rate of about 188 gallons per minute (gpm). Usage rates would vary during the year and would be higher in the summer months when the peak maximum flow rate could be as much as about 50% higher than average (about 275 gpm).

Water Source and Quality

The project water needs would be met by use of groundwater pumped from one of two wells on the plant site. Water for domestic uses by project employees would also be provided by onsite groundwater treated to potable water standards.

It is expected that two new water supply wells in the power blocks of the project site would adequately serve the entire project. A second well would provide redundancy and backup water supply in the event of outages or maintenance of the first well.

Solar Mirror Washing Water

At each solar field, to facilitate dust and contaminant removal, water from the primary desalination process, reverse osmosis (RO), would be used to spray clean the solar collectors. The collectors would be cleaned once or twice per week, determined by the reflectivity monitoring program. This mirror washing operation would be done at night and involves a water truck spraying treated water on the mirrors in a drive-by fashion. The applicant expects that the mirrors will be washed weekly in winter and twice weekly from mid spring through mid fall. Because the mirrors are angled down for washing, water does not accumulate on the mirrors; instead, it would fall from the mirrors to the ground and, due to the small volume, is expected to soak in with no appreciable runoff.

Any remaining rinse water from the washing operation would be expected to evaporate on the mirror surface. The treated water production facilities will be sized to accommodate the solar mirror washing demand of about 114 afy.

If approved, project construction would begin in the fourth quarter of 2010, with commercial operation commencing in the second quarter of 2013.

PROPOSED PROJECT OBJECTIVES

The specific objectives and purpose of PSPP, as identified by the applicant, are:

- To develop a utility-scale solar energy project utilizing parabolic trough technology;
- To construct and operate an environmentally friendly, economically sound, and operationally reliable solar power generation facility; that will contribute to the State of California's renewable energy goals;
- To locate the project in an area with high solar insolation (i.e., high intensity of solar energy);
- To interconnect directly to the CAISO Grid through the SCE electrical transmission system; and
- To commence construction in 2010 to qualify for the American Recovery and Reinvestment Act (ARRA) of 2009's Renewable Energy Grant Program.

SUPPORT FOR PROPOSED PROJECT

The Federal government and the State of California have established the need for the nation and State to increase the development and use of renewable energy in order to enhance the nation's energy independence, meet environmental goals, and create new economic and employment growth opportunities. PSPP would help meet these needs by:

- Assisting California in meeting its Renewable Portfolio Standard goals of 20% of retail electric power sales by 2010 under existing law (Senate Bill 1078 – Chapter 516, Statutes of 2002) and 33% of electrical power retail sales by 2020 under pending legislation;
- Supporting U.S. Secretary of the Interior Salazar's Orders 3283 and 3285 making the production, development and delivery of renewable energy top priorities for the United States;
- Supporting Governor Schwarzenegger's Executive Order S-14-08 to streamline California's renewable energy project approval process and to increase the State's Renewable Energy Standard to 33% renewable power by 2020;
- Supporting the greenhouse gas reduction goals of Assembly Bill 832 (California Global Warming Solutions Act of 2006); and
- Sustaining and stimulating the economy of Southern California by helping to ensure an adequate supply of renewable electrical energy, while creating additional construction and operations employment and increased expenditures in many local businesses.

BLM PURPOSE AND NEED

NEPA guidance published by the Council on Environmental Quality (CEQ) states that environmental impact statements' Purpose and Need section "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action" (40 CFR §1502.13). The following discussion sets forth the purpose of, and need for, the project as required under NEPA.

The BLM's purpose and need for the PSPP is to respond to Palen Solar I, LLC's application under Title V of FLPMA (43 U.S.C. 1761) for a ROW grant to construct, operate, and decommission a solar thermal facility on public lands in compliance with FLPMA, BLM ROW regulations, and other Federal applicable laws. The BLM will decide whether to approve, approve with modification, or deny issuance of a ROW grant to Palen Solar I, LLC for the proposed PSPP. The BLM's actions will also include consideration of amending the CDCA Plan concurrently. The CDCA Plan (1980, as amended), while recognizing the potential compatibility of solar generation facilities on public lands, requires that all sites associated with power generation or transmission not identified in that plan be considered through the plan amendment process. If the BLM decides to approve the issuance of a ROW grant, the BLM will also amend the CDCA Plan as required.

In conjunction with FLPMA, BLM authorities include:

- Executive order 13212, dated May 18, 2001, which mandates that agencies act expediently and in a manner consistent with applicable laws to increase the "production and transmission of energy in a safe and environmentally sound manner."
- The Energy Policy Act 2005, which requires the Department of the Interior (BLM's parent agency) to approve at least 10,000 MW of renewable energy on public lands by 2015.
- Secretarial Order 3285, dated March 11, 2009, which "establishes the development of renewable energy as a priority for the Department of the Interior."

DOE PURPOSE AND NEED

The Applicant has applied to the Department of Energy (DOE) for a loan guarantee under Title XVII of the Energy Policy Act of 2005 (EPAc 05), as amended by Section 406 of the American Recovery and Reinvestment Act of 2009, P.L. 111-5 (the "Recovery Act"). DOE is a cooperating agency on this EIS pursuant to an MOU between DOE and BLM signed in January 2010. The purpose and need for action by DOE is to comply with its mandate under EPAc by selecting eligible projects that meet the goals of the Act.

EPAc 2005 established a Federal loan guarantee program for eligible energy projects, and was amended by the Recovery Act to create Section 1705 authorizing a new program for rapid deployment of renewable energy projects and related manufacturing facilities, electric power transmission projects, and leading edge biofuels projects. The primary purposes of the Recovery Act are job preservation and creation, infrastructure investment, energy efficiency and science, assistance to the unemployed, and State

and local fiscal stabilization. The Section 1705 Program is designed to address the current economic conditions of the nation, in part, through renewable energy, transmission and leading edge biofuels projects.

CEQA FUNCTIONAL EQUIVALENT AND NEPA PROCESSES

The Bureau of Land Management (BLM) and the Energy Commission have executed a Memorandum of Understanding concerning their intent to conduct a joint environmental review of the project in a single National Environmental Policy Act (NEPA)/California Environmental Quality Act (CEQA) process. It is in the interest of the BLM and the Energy Commission to share in the preparation of a joint environmental analysis of the proposed project to avoid duplication of staff efforts, to share staff expertise and information, to promote intergovernmental coordination at the local, state, and federal levels, and to facilitate public review by providing a joint document and a more efficient environmental review process.

Pursuant to the Federal Land Policy and Management Act, the BLM has authority to process and authorize requests for ROWs for such uses as the proposed power project, its associated transmission lines, and the other related facilities to be constructed and operated on public land BLM administers. In processing applications, the BLM must comply with NEPA, which requires that federal agencies consider the environmental impacts associated with the construction and operation of a proposed project on BLM administered public land before making a decision.

As the lead agency under CEQA, the Energy Commission is responsible for reviewing and ultimately approving or denying all applications to construct and operate thermal electric power plants, 50 MW and greater, in California. The Energy Commission's facility certification process carefully examines public health and safety, environmental impacts and engineering aspects of proposed power plants and all related facilities such as electric transmission lines and natural gas and water pipelines.

The SA/DEIS includes analyses normally contained in an Environmental Impact Report (EIR) required by CEQA. When issuing a license, the Energy Commission is the lead state agency under CEQA, and its process is functionally equivalent to the preparation of an EIR.

PUBLIC AND AGENCY COORDINATION

PUBLIC COORDINATION

Energy Commission regulations require staff to send notices regarding receipt of an AFC and Commission events and reports related to proposed projects, at a minimum, to property owners within 1,000 feet of a project and 500 feet of a linear facility (such as transmission lines, gas lines and water lines). This was done for PSPP on December 21, 2009. BLM provides public participation opportunities consistent with the President's Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the NEPA (40 CFR Parts 1500 – 1508), BLM Planning Regulations (43 CFR Part 1600), and respective BLM Handbooks (H-1790-1 and H-1601-1).

The Bureau of Land Management and Energy Commission's outreach efforts are an ongoing process that, to date, has involved the following efforts:

BLM Scoping Meeting

The Notice of Intent to prepare an environmental impact statement for this proposed project was published in the *Federal Register* on November 23, 2009. On December 11, 2009, BLM held its Scoping Meeting at the University of California-Riverside, Palm Desert Campus. A draft scoping report was released for public review and comment in January 2010.

Issues were identified by reviewing the comment documents received. Many of the comments identified similar issues; all of the public comment documents were reviewed and the following section provides a summary of the issues, concerns, and/or questions raised.

The comments are organized to reflect the structure of the SA/DEIS.

Purpose and Need

- Project description should not be narrowly defined to rule out feasible alternatives
- Project should be discussed in the context of the larger energy market; identify potential purchasers of the power produced; discuss how project will assist in meeting its renewable energy portfolio standards and goals

Air Resources (Air sheds)

- Greenhouse gas emissions/climate change impacts on plants, wildlife, and habitat
- Planning for species adaptation due to climate change
- Discussion of how projected impacts could be exacerbated by climate change
- Quantify and disclose anticipated climate change benefits of solar energy
- Discussion of trenching/grading/filling and effects on carbon sequestration of the natural desert

Soils Resources

- Impacts to desert soils
- Increased siltation during flooding and dust
- Impacts to crypto-biotic crust
- Preparation of a drainage, erosion, and sediment control plan

Water Resources (Surface and ground water)

- If new wells will draw water from mainstream of the lower Colorado River, an entitlement to the use of Colorado River water is required by Section 5 of the Boulder Canyon Project Act (BCPA) and by the Consolidated Decree. If entitlement is required, it must be satisfied from Colorado River water apportioned for use within the State of California by the Secretary in accordance with the terms of the

Consolidated Decree. The entitlement to be used for a proposed solar project may be an existing entitlement made available for this purpose by an existing entitlement holder either directly or through exchange.

- Identify impacts to jurisdictional waters of the US and California
- Effects of additional groundwater pumping in conjunction with other groundwater issues
- Groundwater and surface water impacts
- Subsidence potential
- Impacts to downgradient groundwater, surface water, and wetlands
- Effects of diversion of water from ephemeral streams
- Water supply impacts related to dust control, fire prevention and containment, vegetation management, sanitation, equipment maintenance, construction, and human consumption
- Description of water conservation measures to reduce water demands
- Effects of climate change on water supply
- Discussion of potential effects of project discharges, if any, on surface and groundwater quality
- Disposal of wastewater or other fluids, if any
- Determination if project requires a Section 404 permit under the Clean Water Act (CWA)
- Suggests BLM include a jurisdictional delineation for all Waters of the US, including ephemeral drainages
- Description of natural drainage patterns, project operations, identify whether any component of project is within 50 or 100-year floodplain
- Provide information on CWA Section 303(d) impaired waters, if any, and efforts to develop and revise TMDLs

Biological Resources

- If there are threatened or endangered species present, recommend BLM consult with USFWS and prepare a Biological Opinion under Section 7 of the ESA
- Consider adopting a formal adaptive management plan
- Impacts to all known species, not just special status, should be analyzed to assure ecosystem level protection—permanent loss of 4,000 acres of habitat and associated species is significant and cannot be mitigated
- Maximize options to protect habitat and minimize habitat loss and fragmentation
- Impacts associated with constructing fences
- Impacts due to increase of shade in the desert environment
- Seasonal surveys should be performed for sensitive plant and animal species

- Impacts to all known species, not just special status, should be analyzed to assure ecosystem level protection—permanent loss of habitat and associated species is significant and cannot be mitigated
- If ponded water or bioremediation areas would attract wildlife, particularly migratory waterfowl
- Acquisition of lands for conservation should be part of mitigation strategy
- Identify fire prevention BMP due to use of high temperature liquids
- Impacts regarding habitat fragmentation and loss of connectivity

Vegetation Resources (Vegetative communities, priority and special status species)

- Seasonal surveys should be performed for sensitive plant species—lack of fall surveys may under represent onsite plants
- Vegetation maps should be at scale that is useful for evaluating impacts
- Impacts due to non-native invasive species
- Inclusion of an invasive plant management plan
- Impacts to the following species:
 - Dwarf germander
 - Harwood's milkvetch
 - Jackass clover
 - Coachella Valley Milkvetch

Wildlife Resources (Priority species, special status species)

- Desert tortoise; especially impacts to existing movement corridor connection from the Chuckwalla DWMA; translocation proposed results in high mortality; project site located within the Eastern Colorado Desert Tortoise Recovery Unit; portion of site designated as critical habitat
- Impacts to the following species:
 - Burrowing owl
 - Desert bighorn sheep
 - Mojave fringe-toed lizard
 - Mule deer
 - American badger
 - Northern harrier
 - Swainson's hawk
 - Loggerhead shrike
 - Purple martin

- Migratory birds
- Golden eagles
- Impacts to wildlife movement corridors
- Preserve large landscape-level migration areas

Cultural Resources

- Has a 100% archaeological inventory been conducted pursuant to Section 106 of the National Historic Preservation Act and BLM Manual 8100?
- Have archaeological sites been evaluated pursuant to the National Register of Historic Places criteria?
- Has consultation with Native Americans take place?

Visual Resources

- Baseline for visual resources has not been categorized
- Avoid impacting visually sensitive areas

Land Use/Special Designations (ACECs, WAs, WSAs, etc.)

- Applicant implies that biological resources within project area are not sensitive because not located within ACEC or Desert Wildlife Management Area (DWMA), but many areas outside such designated areas do contain significant biological resources
- Portion of project occurs within a multi-species Wildlife Habitat Management Area (WHMA) designated pursuant to the Northern and Eastern Colorado Desert Coordinated Management Plan (NECO) with the specific role of providing connectivity for the desert tortoise across Interstate-10 between the Chuckwalla Desert Wildlife Management Area (DWMA), the Chuckwalla Valley, and the Chemcheuvi DWMA
- Evaluation of consistency with land use and regulatory plans, including Executive Order 11644, which allows for use of off-road vehicles on public lands
- Describe reasonably foreseeable future land use and associated impacts resulting from additional power supply
- Consider direct and indirect effects of the inter-connecting transmission line
- Project is located adjacent to Palen Lake ACEC and associated archaeological sites

Public Health and Safety

- Identify fire prevention BMP due to use of high temperature liquids
- Discussion if bioremediation areas are to be used for soil contaminated by heat transfer fluid
- Discussion of concentrated, dewatered solid waste associated with evaporation ponds

Noise/Vibration

- Consider wildlife as sensitive receptors
- Dry cooling process noise/vibration impacts on wildlife

Recreation (RMAs, facilities, LTVAs, dispersed recreation opportunities, etc.)

- Evaluation should include impacts regarding off-highway vehicle use (OHV), camping, photography, hiking, wildlife viewing, and rockhounding
- Evaluation should include number of users, value of affected land for recreational purposes, and need to locate and acquire replacement venues for lands lost
- Indirect impacts caused by displacing recreational users
- Cumulative loss of land available for OHV recreation

Social and Economic Setting

- Evaluation of economic impacts due to construction, implementation, and operation
- Economic impacts regarding loss of commerce due to recreational use losses

Environmental Justice (minority and low-income communities)

- Evaluation whether diminished recreational access would be placed disproportionately on minorities and low-income communities

Cumulative Impacts

- Identify impacts from other projects occurring in the vicinity, including solar, wind, geothermal, roads, transit, housing, ORV use, military maneuvers, and other development
- Cumulative analysis area should encompass the Sonoran/transition desert areas of the California desert at a minimum
- Some reasonably foreseeable projects in the vicinity include all the solar and wind applications along Interstate-10
- Cumulative analysis area should encompass Chuckwalla Valley region

Alternative Development and/or Alternative Design Criteria

- Project description should not be narrowly defined to rule out feasible alternatives
- Preferred alternative should consider conjunctive use of disturbed private land in combination with adjacent lower value federal land
- Reduce project size by excluding proposed eastern half to exclude sensitive dune habitat
- Owens Lake “dust project” area as potential alternative site
- Alternatives should include: sites not under BLM jurisdiction; project extent and electrical power generation that differ from proposal; use of different technology; benefits associated with the proposed technology

- Alternatives should describe rationale used to determine whether impacts of an alternative are significant or not
- Consider reconfiguration alternatives proposed by CEC in their Dec. 7, 2009 data request—to minimize impacts to wildlife movement and sensitive biological resources such as the Palen Dunes
- Discuss feasibility of using residential and wholesale distributed generation, in conjunction with increased energy efficiency, as an alternative

Libraries

On December 21, 2009, the Energy Commission staff sent the PSPP AFC to the following libraries: Riverside Main Library, Palo Verde Valley District Library, Lake Tamarisk Library, Coachella Branch Library, and Cathedral City Branch Library.

In addition, to these local libraries, copies of the AFC are also available at the Energy Commission's Library in Sacramento, the California State Library in Sacramento, as well as, public libraries in Eureka, Fresno, Los Angeles, San Diego, and San Francisco.

Public Outreach Efforts

The Energy Commission staff provided notification by letter and enclosed a notice of the January 25, 2010 Informational Hearing and Site Visit for PSPP, which included a joint presentation by the CEC and the BLM. In addition to property owners and persons on the general project mail-out list, notification was provided to local, state and federal public interest and regulatory organizations with an expressed or anticipated interest in this project. Also, elected and certain appointed officials were similarly notified of the hearing and site visit.

Data Request and Data Response and Issue Resolution Workshops

The Energy Commission staff provided notification by letter and enclosed a notice of the

CEC staff workshops (December 9, 2009 Data Request Workshop and January 7, 2010 Data Response and Issue Resolution Workshop) to property owners and persons on the general project mail-out list. BLM attended these workshops held by the CEC. Notification was also provided to local, state and federal public interest and regulatory organizations with an expressed or anticipated interest in this project.

Notification to the Local Native American Community

The BLM has notified affected Indian Tribes regarding the proposed project, has sought their comments, and has invited them to consult on the project on a government-to-government basis. The affected Indian Tribes are currently working with the BLM, Energy Commission, and the State Historic Preservation Officer's office on the development of the Programmatic Agreement.

The Energy Commission sent mailings regarding the project on December 9, 2009, December 21, 2009, and January 7, 2010 mail-outs which were sent to the Native American Heritage Commission.

Energy Commission's Public Adviser's Office

The Public Adviser helps the public participate in the Energy Commission's hearings and meetings. The Public Adviser assists the public by advising them how they can participate in the Energy Commission process; however, the Public Adviser does not represent members of the public. The Public Adviser's Office attended and presented information at the January 25, 2010 Informational Hearing and Site Visit.

AGENCY COORDINATION

The Energy Commission and BLM seek comments from and work closely with other regulatory agencies that administer LORS that may be applicable to proposed projects. These agencies may include as applicable, the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, State Historic Preservation Officer, State Water Resources Control Board/Regional Water Quality Control Board, California Department of Fish and Game, California Air Resources Board, and the regional air quality management district. On December 21, 2009, the Energy Commission staff sent the PSPP AFC to all local, state, and federal agencies that might be affected by the proposed project.

ENVIRONMENTAL JUSTICE

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," focuses federal attention on the environment and human health conditions of minority communities and calls on federal agencies to achieve environmental justice as part of this mission. The order requires the United States Environmental Protection Agency (US EPA) and all other federal agencies to develop strategies to address this issue. The agencies are required to identify and address any disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority or low-income populations. Some agencies have also interpreted this order as applying to state agencies that receive federal funding. While there remains some ambiguity over whether this directive applies to the Energy Commission, staff has decided to assume that it does and conduct the appropriate analysis. In any event, this analysis is necessary to satisfy BLM's obligations under the Executive Order.

In considering environmental justice in energy facility siting cases, staff uses a demographic screening analysis to determine whether a low-income and/or minority population exists within the potentially affected area of the proposed site. The demographic screening is based on information contained in two documents: Environmental Justice: Guidance Under the National Environmental Policy Act (Council on Environmental Quality, December, 1997) and Guidance for Incorporating

Environmental Justice Concerns in EPA's Compliance Analyses (U.S. Environmental Protection Agency, April, 1998). The screening process relies on Year 2000 U.S. Census data to determine the presence of minority and below-poverty-level populations. Environmental Justice: Guidance Under the National Environmental Policy Act, defines

minority individuals as members of the following groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. A minority population is identified when the minority population of the potentially affected area is

1. greater than 50%; or
2. when one or more U.S. Census blocks in the potentially affected area have a minority population of greater than 50%.

In addition to the demographic screening analysis, staff follows the steps recommended by the U.S. EPA's guidance documents which are: outreach and involvement; and if warranted, a detailed examination of the distribution of impacts on segments of the population.

Staff has followed each of the above steps for the following 11 sections in the SA/DEIS: Air Quality, Hazardous Materials, Land Use, Noise, Public Health, Socioeconomics, Soils and Water, Traffic and Transportation, Transmission Line Safety/Nuisance, Visual Resources, and Waste Management. Over the course of the analysis for each of the 11 areas, staff considered potential impacts and mitigation measures and whether there would be a significant impact on an environmental justice population. Staff determined that the remaining technical areas did not involve potential environmental impacts that could contribute to a disproportionate impact on an environmental justice population, and so did not necessitate further environmental justice analysis.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES AND MITIGATION

With the exception of the technical areas identified below, staff believes that as currently proposed, including the applicant's and the staff's proposed mitigation measures and the staff's proposed conditions of certification, PSPP would comply with all applicable laws, ordinances, regulations, and standards (LORS). However, as noted in the Visual Resources section, visual impacts would be significant and could not be mitigated to less than significant levels. Additionally, as mentioned in the Biological Resources and Land Use sections, the proposed project also creates a significant and unavoidable impact under CEQA. If this project were to be approved, an override consideration would be necessary.

In addition, four technical areas are currently undetermined with respect to mitigation of potential impacts and/or for conformance with applicable LORS. For a more detailed review of potential impacts and LORS conformance, see staff's technical analyses in the SA/DEIS. The status of each technical area is summarized in the table below and the subsequent text.

Technical Area	Complies with LORS	Impacts Mitigated
Air Quality/Greenhouse Gases	Undetermined	Yes
Biological Resources	No	No
Cultural Resources	Undetermined	Undetermined
Efficiency	N/A	Yes
Facility Design	Yes	Not Applicable
Geology & Paleontology	Yes	Yes
Hazardous Materials	Yes	Yes
Land Use	No	No

Technical Area	Complies with LORS	Impacts Mitigated
Noise and Vibration	Yes	Yes
Public Health	Yes	Yes
Reliability	Not Applicable	Yes
Socioeconomic Resources	Yes	Not Applicable
Soil & Water Resources	Undetermined	Yes
Traffic & Transportation	Yes	Yes
Transmission Line Safety/Nuisance	Yes	Yes
Transmission System Engineering	Undetermined	Undetermined
Visual Resources	No	No
Waste Management	Yes	Yes
Worker Safety and Fire Protection	Yes	Yes

AIR QUALITY/GREENHOUSE GASES

South Coast Air Quality Management District (SCAQMD) has determined in their Preliminary Determination of Compliance (PDOC) that the PSPP would comply with the SCAQMD's LORS, and staff has determined that with recommended staff and SCAQMD mitigation measures the project's impacts would be less than significant. For a determination on LORS conformance, however, staff needs to receive and review the Final Determination of Compliance (FDOC) from the SCAQMD, to ensure revisions have been made to address Energy Commission staff and other party comments on the PDOC. This analysis, which will likely require revisions to both the Commission staff recommended and South Coast AQMD conditions of certification, will be included in the SSA/FEIS.

BIOLOGICAL RESOURCES

The impacts of the proposed project to the sand transport corridor and sand dune wildlife habitat cannot be mitigated to less than significant levels unless the project is altered to avoid the obstruction of sand transport processes. The direct, indirect, and cumulative impacts to Mojave fringe-toed lizard, a sand-dependent species considered sensitive by state and federal agencies, are also significant and immitigable unless the project is altered to avoid sensitive habitat.

Issues still being discussed include the following:

- Whether a "take" permit might be required for this project under the new federal Eagle Act. Staff has recommended that the applicant contact USFWS to determine if nest surveys for eagles should be conducted this spring.
- REAT (BLM, FWS, CFG, and CEC) agencies are working to integrate state and federal requirements concerning mitigation to address direct impacts to endangered species and related habitat loss, and cumulative impacts.
- Staff are reviewing and commenting on several applicant reports. These reports include: Desert Tortoise Relocation/Translocation Plan, Raven Control and Management Plan, Burrowing Owl Mitigation Plan, Weed Management Plan, Special-Status Plant Impact Avoidance Plan, and the Decommissioning and Closure Plan. Staff will also be working with the applicant to develop an Avian Protection Plan and a Groundwater-Dependent Vegetation Monitoring Plan.

Staff is expecting to receive supplemental reports describing 2010 survey results that the applicant will be conducting on the proposed Transmission Line route.

CULTURAL RESOURCES

As of the publication of this SA/DEIS, the Cultural Resources section's LORS compliance and impacts mitigation conclusions are currently undetermined.

Issues still being discussed include the following:

- Mitigation for project impacts to cultural resources will be handled in a Programmatic Agreement (PA) negotiated among all stakeholders (i.e., federal, state, and private). Development of the PA by the BLM is underway, but will not be completed until mid-summer.
- The cultural resources data compilation for the alternative project configurations is ongoing. The comparative analysis will be included in the Supplemental document.
- The data compilation for the cumulative analysis is also ongoing, and that analysis will be included in the Supplemental document.

The Programmatic Agreement, when completed, will result in the Palen Solar project being in compliance with all applicable LORS.

With the finalization and implementation of the PA, staff expects all project impacts will be mitigated.

Staff is not expecting additional information from the applicant.

EFFICIENCY

No Unmitigated Issues/No additional documents needed.

FACILITY DESIGN

No Unmitigated Issues/No additional documents needed.

GEOLOGY & PALEONTOLOGY

No Unmitigated Issues/No additional documents needed.

HAZARDOUS MATERIALS

No Unmitigated Issues/No additional documents needed.

LAND USE

The proposed Palen Solar Power Project would be located on land within the California Desert Conservation Area (CDCA) Plan area. The project area is in the "Multiple-Use Class M" land use category, except for a 40 acre parcel in private ownership. The Class M land use category allows electrical generation plants in accordance with federal, state, and local laws subject to approval of a CDCA Plan Amendment by the U.S. Bureau of Land Management (BLM).

The proposed project requires BLM approval of an Amendment to the California Desert Conservation Area Plan and issuance of a ROW grant for use of approximately 5,200 acres. The applicant has submitted a ROW application to the BLM. The applicant's ROW application will be modified to include the project's transmission line when the proposed transmission line route is finalized.

A 40 acre parcel (APN: 810-110-007) within the project site is under the County of Riverside's jurisdiction. The proposed project's potential use of this parcel represents a use that would be inconsistent with the stated intent of the Riverside County General Plan, Eastern Riverside County Land Use Plan, and the county's "Open Space–Rural" general plan land use designation; and, therefore creates a significant impact under the California Environmental Quality Act Guidelines, Appendix G, "Land Use And Planning" condition "B."

The proposed project also creates a significant and unavoidable CEQA impact under "Wilderness and Recreation" condition "B."

The incremental effect of the proposed project, combined with the effects of the other projects within the geographic scope of the cumulative analysis would be cumulatively considerable and would substantially reduce a scenic and biological important resource of value, and may substantially reduce an important cultural resource of value pending the results of a future study.

NOISE AND VIBRATION

No Unmitigated Issues/No additional documents needed.

PUBLIC HEALTH

No Unmitigated Issues.

Needs to receive/review FDOC from the South Coast AQMD.

RELIABILITY

No Unmitigated Issues/No additional documents needed.

SOCIOECONOMIC RESOURCES

No Unmitigated Issues/No additional documents needed.

SOIL & WATER RESOURCES

Staff concluded that construction, operation, and decommissioning of the proposed Palen Solar Power Project (PSPP) could potentially impact soil and water resources. Where these potential impacts have been identified, staff has proposed mitigation measures to reduce identified impacts to levels that are less than significant.

However, completion of staff's analysis of the project is subject to the following:

- A finding by the U.S. Army Corps of Engineers of whether the ephemeral drainages on the Project site are jurisdictional waters of the U.S. Without this determination,

staff cannot determine whether the Project would comply with Section 404 of the Clean Water Act.

TRAFFIC & TRANSPORTATION

No Unmitigated Issues/No additional documents needed

TRANSMISSION LINE SAFETY/NUISANCE

No Unmitigated Issues/No additional documents needed

TRANSMISSION SYSTEM ENGINEERING

As of the publication of this SA/DEIS, the Transmission System Engineering section's LORS compliance and impacts mitigation conclusions are currently undetermined.

The Phase I Interconnection Study does not provide a meaningful analysis of the reliability impacts of the PSPP because the study analyzed the project in a cluster that has been reduced from 9,690 MW to 2,200 MW. Without a meaningful analysis of the reliability impacts of the PSPP staff is unable to determine whether or not the project will comply with reliability LORS. The Phase II Interconnection Study of the 2,200 MW would provide a meaningful analysis of these reliability impacts but is not scheduled to be published until Fall 2010.

VISUAL RESOURCES

Staff concluded that the proposed project would result in a substantial adverse impact to existing scenic resource values as seen from several viewing areas and Key Observation Points in the project vicinity, Chuckwalla Valley, Palen McCoy Wilderness, and Chuckwalla Mountains Wilderness. Additionally, staff concluded that the project would not be consistent with several applicable goals and policies of the Riverside County Integrated Plan.

Visual impacts would be significant in terms of CEQA and could not be mitigated to less than significant levels. If this project were to be approved, an override consideration would be necessary.

WASTE MANAGEMENT

No Unmitigated Issues/No additional documents needed

WORKER SAFETY AND FIRE PROTECTION

No Unmitigated Issues/No additional documents needed. However, staff's proposed mitigation needs review and comment from the Riverside County Fire Department.

CALIFORNIA ENERGY COMMISSION STAFF'S ASSESSMENT

Each technical area section of the SA/DEIS contains a discussion of the project setting, impacts, and where appropriate, mitigation measures and proposed conditions of certification. The SA includes staff's assessment of:

- the environmental setting of the proposal;
- impacts on public health and safety, and measures proposed to mitigate these impacts;
- environmental impacts, and measures proposed to mitigate these impacts;
- the engineering design of the proposed facility, and engineering measures proposed to ensure the project can be constructed and operated safely and reliably;
- project closure;
- project alternatives;
- compliance of the project with all applicable laws, ordinances, regulations and standards (LORS) during construction and operation;
- environmental justice for minority and low income populations;
- conclusions and recommendations; and,
- proposed conditions of certification.

CONCLUSIONS

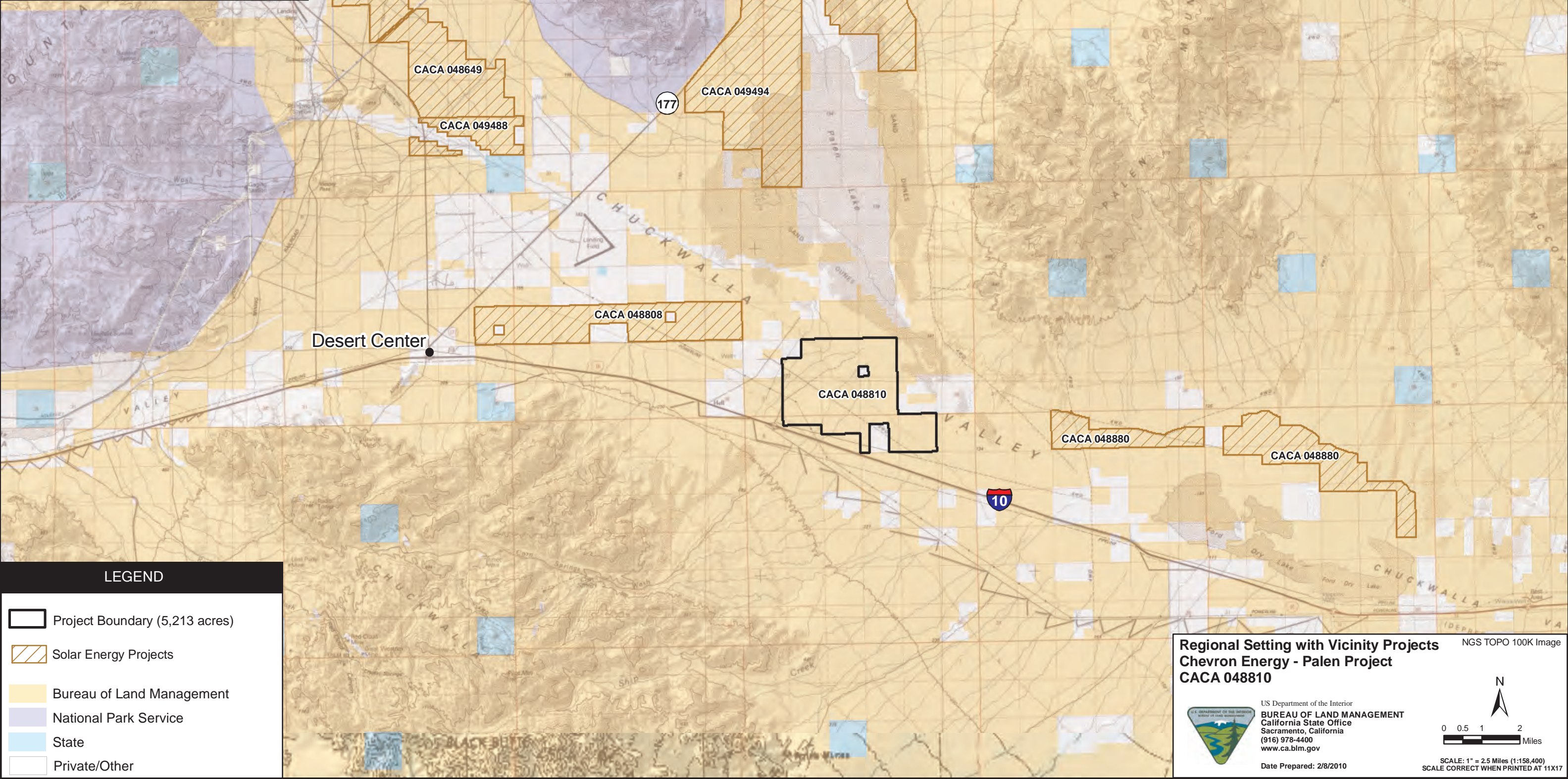
Where applicable, staff has identified any outstanding issues in the technical sections of the SA/DEIS. To resolve these issues, staff requires either additional data, further discussion and analysis, or is awaiting conditions from a permitting agency prescribing mitigation.

Staff will work to resolve the outstanding issues and update the preliminary conclusions for the SSA/FEIS; in addition, the SSA/FEIS will also address all comments concerning the SA/DEIS. Staff and BLM will conduct a public workshop(s) in April or May 2010 on the SA/DEIS. Staff anticipates publication of the SSA/FEIS in July 2010.

REFERENCES

Solar Millennium2009a-Solar Millennium (tn: 52939). Application for Certification Vol 1 & 2, dated 8/24/2009.

Solar Millennium2009b-Solar Millennium (tn: 54008). Data Adequacy Supplement, dated 10/26/2009.



LEGEND

Project Boundary (5,213 acres)

Solar Energy Projects

Bureau of Land Management

National Park Service

State

Private/Other

Regional Setting with Vicinity Projects

Chevron Energy - Palen Project

CACA 048810

US Department of the Interior

BUREAU OF LAND MANAGEMENT

California State Office

Sacramento, California

(916) 978-4400

www.ca.blm.gov

Date Prepared: 2/8/2010

NGS TOPO 100K Image

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Miles

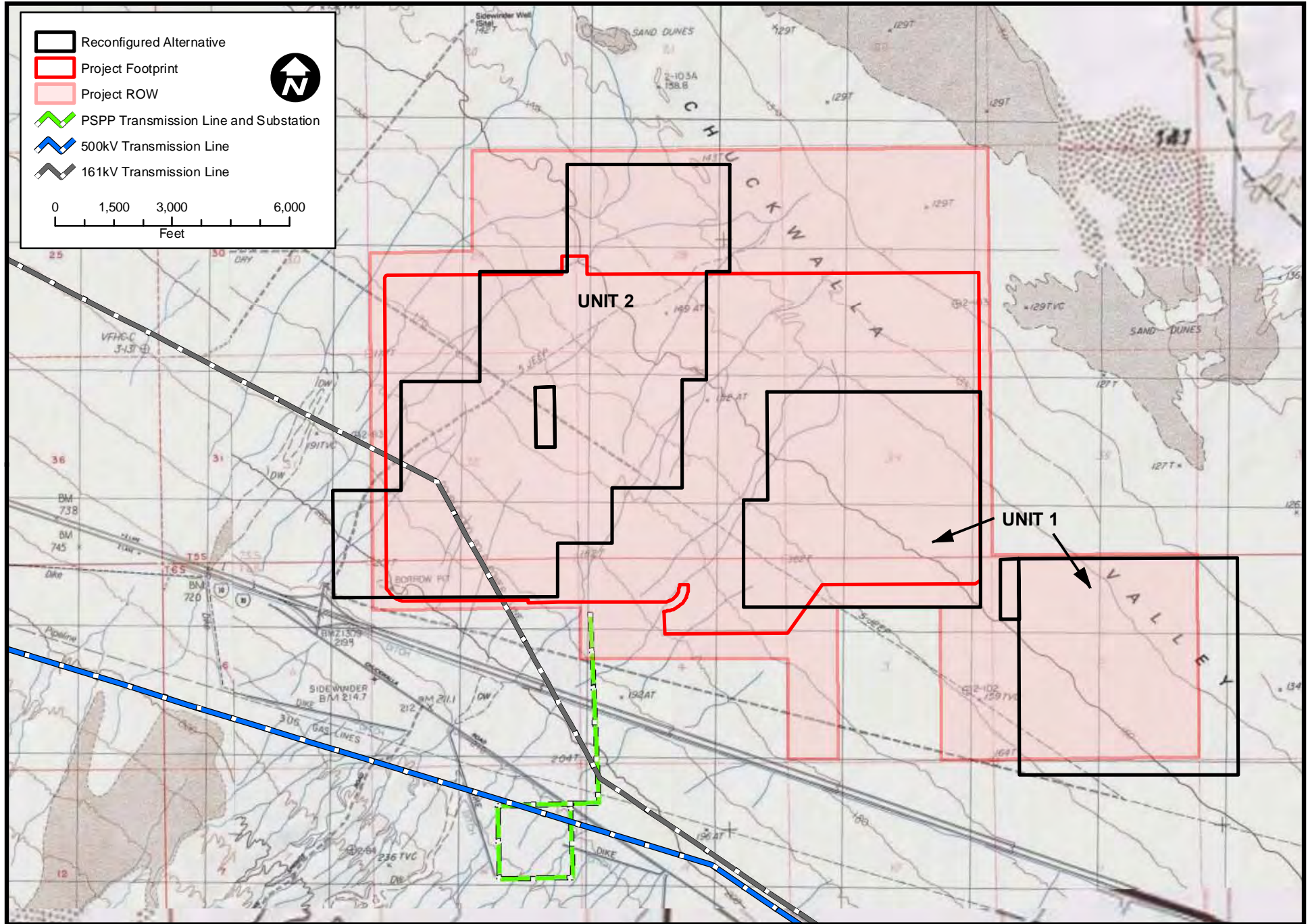
SCALE: 1" = 2.5 Miles (1:158,400)

SCALE CORRECT WHEN PRINTED AT 11X17

ALTERNATIVES - FIGURE 1 **Palen Solar Power Project – Reconfigured Alternative**

MARCH 2010

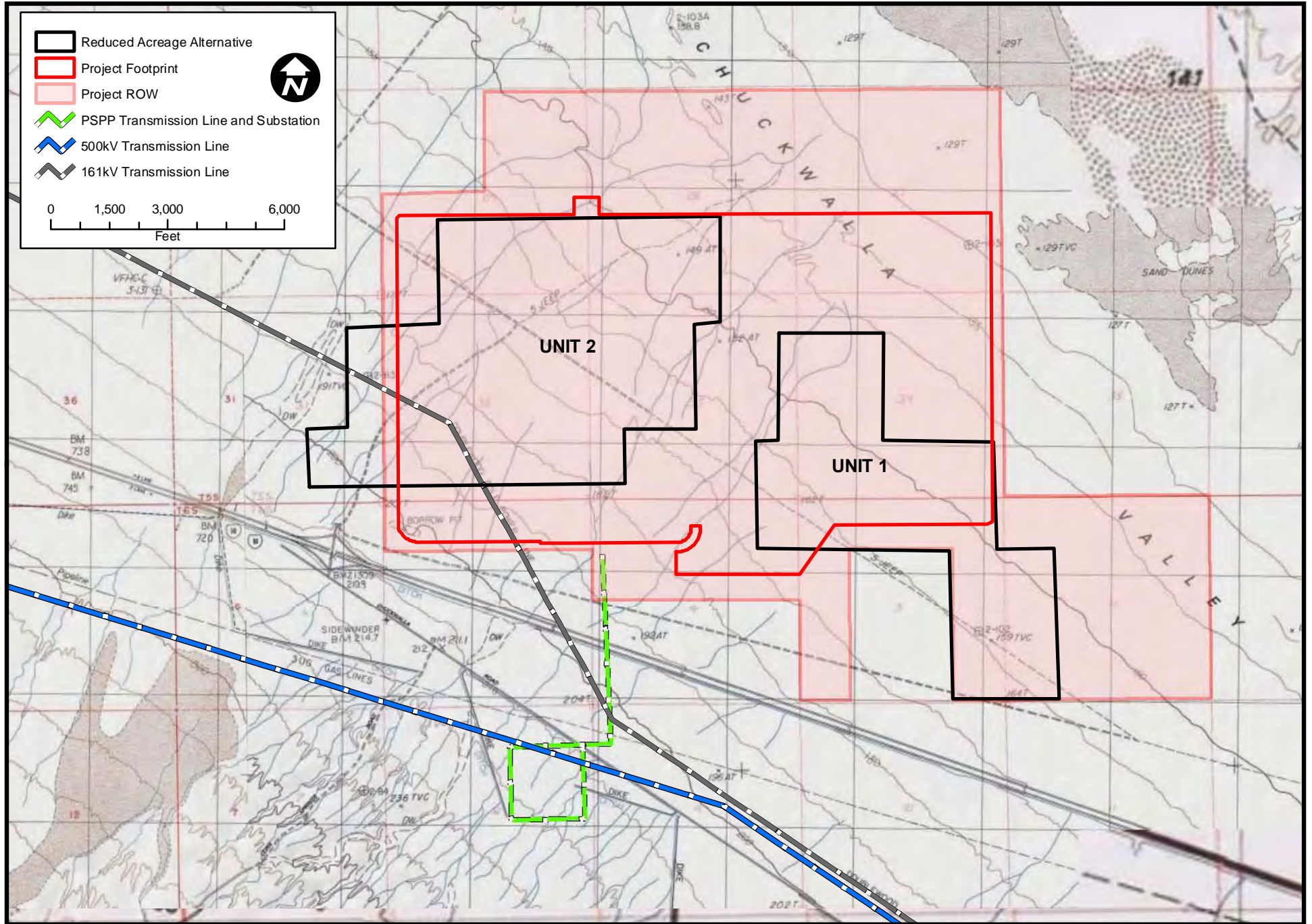
ALTERNATIVES



ALTERNATIVES - FIGURE 2 **Palen Solar Power Project – Reduced Acreage Alternative**

MARCH 2010

ALTERNATIVES



ALTERNATIVES - FIGURE 3
Palen Solar Power Project - North of Desert Center Alternative

MARCH 2010

ALTERNATIVES

